



PATENT ABSTRACTS OF JAPAN

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TSUON RII
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KIRINO YOSHIO**(54) INCLINED SURFACE SILICON WAFER AND ITS
SURFACE STRUCTURE FORMING METHOD****(57) Abstract:**

PURPOSE: To provide a silicon wafer capable of modifying a surface structure and giving an oxide film small in oxidation-induced stacking faults and excellent in breakdown strength.

CONSTITUTION: This inclined surface silicon wafer is a silicon wafer of face orientation (100), and in an incline surface that a vertical line of (001) face is inclined at an angle of 0.01 to 0.2° in the (110) direction, has a step structure crystalline face

containing a step of only a step Sa (step difference corresponds to a height of a monoatomic layer and also the step extends in the parallel direction to a silicon atomic column of an upper step) substantially high in regulations. In the silicon wafer surface of the face orientation (100), (001) mirror face of the silicon wafer inclined at an angle of 0.01° to 0.2° to the (110) axial direction is washed, thereafter it is annealed at 600 to 1300°C for one min. or more in a super-pure hydrogen atmosphere to form a step structure substantially composed of only a step Sa, preferably.

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